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## **SERVICE BULLETIN June 2011**

### **Issue Date**

Tuesday, June 14, 2011

### **Subject**

Zenair floats: Leaks around some rivets.

### **Compliance Time**

Immediately

### **Background**

The great majority of operators using Zenair floats have not experienced leaking floats. Some of the earlier and smaller Zenair floats, however, (kits and assembled) were supplied with aluminum "pulled" rivets that have an aluminum pin (mandrel). Being aluminum, this mandrel severs easily during the rivet-setting process and, in some instances, can break before the rivet is fully squeezed. It is possible for rivets set in this manner to eventually allow water to penetrate the float.

### **Repair and Maintenance**

Should a leak be found around such a rivet, the rivet should be replaced with one of the new type Aluminum rivet currently used by Zenair (see below for specifications). These new rivets have a stainless steel mandrel which improves rivet-setting; Additionally, it is recommended that replacement rivets be dipped into 3M 5200 Marine Adhesive Sealant prior to installation, for extra strength and sealing.

### **Preventive Protection**

The bottom extruded keel is the area of the float under the most loads during regular operations. Changing the rivets in this area to the new type rivets (aluminum with stainless steel mandrel) could provide better protection against eventual leaking in this area. Therefore, all aluminum-stem rivets on the keel should be changed.

For more information on the new types of rivets now supplied with Zenair floats, see:

<http://zenairfloatassembly.com/1450A/pdfPAGE/Rivets%20CA-43H.pdf>

For assembly manuals, see <http://zenairfloatassembly.com>

**Affected Models:** All except for floats assembled with solid rivets.

### **Required Items:**

CA-42H	CLOSED END ALUMINUM RIVET WITH STAINLESS STEEL MANDREL ( #30 holes) Short 1/8" rivets: Skin to bulkheads.
CA-43H	CLOSED END ALUMINUM RIVET WITH STAINLESS STEEL MANDREL ( #30 holes) Long 1/8" rivets: Front keel.

## **Putting your float plane in the water:**

When installing Zenair floats on your aircraft, whether new, after a period of storage, or after a recent repair, a few precautionary steps can avoid much grief. Our floats seldom leak, but sometimes, as with all floats, they can. Therefore, do not put your float plane in the water in the evening. If your floats leak, your aircraft could be under water in the morning! Rather, put your float plane in the water in the morning and inspect each float compartment for water throughout the first day. If your floats are leaking, take them back out of the water and fix.

## **Repairing leaking floats:**

To check for leaks, take the floats out of the water. Rig an adapter to your vacuum cleaner (shop vac) hose, so that with your vacuum cleaner, you have an air-tight fit over the pump-out hole(s) in the floats.

Now attach the vacuum cleaner hose to the DISCHARGE side of the vacuum cleaner (blows air OUT).

Fill a squirt bottle with soapy water. Turn on the vacuum cleaner, which will put no more than 3 or 4 pounds of pressure in the float compartment (more could damage the floats). Now, go over each seam with the soapy water, looking for bubbles. Anywhere bubbles appear, indicating that air is leaking, mark with a grease pen or magic marker.

When done with this process with all holes for both floats, connect the vacuum cleaner hose to the suction side of the vacuum. Get some gas tank sloshing compound, or other "thin" sealant (see below for suggestions), and a small brush.

Attach the end of the vacuum hose to the pump-out hole of any compartment that has leaks, and carefully paint the area of the leak with the sealant, allowing it to be drawn into the seam by the vacuum's suction. Give it a minute to dry, then feed in a bit more. Most leaks won't take much to seal up.

Move on to the next leak and/or the next compartment until done.

If a section of a seam has a fairly large leak, take the rivets out, clean the seam and fill with sealer before resetting the rivets in that section.

The use of a vacuum cleaner is simple, inexpensive, and tells you exactly where the leaks are. If only a few rivets are leaking, all you may have to do is to take them out and replace them (remember to dip them in the sealant prior to setting them). Some stainless steel rivets can leak if there is no sealant on the rivet heads.

Where there are large leaking holes, fill with the caulking gun and let dry for some time.

Note that the sealant sticks very well to primer paint and not as much to raw aluminum.

## **Other products:**

Gluvit weatherproof epoxy sealer.

This is a two part sealer. Seals leaky seams and rivets in aluminum hulls, and leaks around fiberglass cabins or decks. Hard protective coating flexes with hull movements to bridge and seal hairline cracks.

Available at most marine stores such as Pride Marine. For sales inquiries, call Toll Free: 1-888-732-8883 or visit:

[www.pridemarine.com](http://www.pridemarine.com) Also available from West Marine, or <http://www.marinetex.com/gluvit.html>

Coat-It Epoxy Sealer with Kevlar®

A waterproof epoxy sealer for aluminum, steel, fiberglass, wood, and concrete. Apply with brush, roller, or squeegee. The 10 mil prime coat is flexible and non-shrinking in one application. Pot life of 30 minutes; cure time: 10 hours @ 70°F. Use above or below the water line. Use with or without fiberglass reinforcement. It creates a hard black surface that is scratch-resistant and durable. <http://www.tapplastics.com/shop/product.php?pid=30>

If you received aluminum rivets with your floats, contact Zenair so that new rivets can be shipped to you.

For additional information, please contact Zenair Ltd.

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